

Imperial Valley Study Group

Transmission Planning Collaborative

California Energy Commission Workshop on
Transmission Constraints to Geothermal Development

April 11, 2005

Presented by Dave Olsen



Imperial Valley Geothermal Resource

- 540 MW in operation now
- 200 MW Salton Sea Unit 6, on-line 3/08
- Additional >2,000 MW to export
- California RPS »» 24,800 GWh/yr new renewables in 2010; 30,610 GWh/yr, 2017
 - Imperial Valley geothermal ~16,600 GWh/yr
 - Requires new transmission

Study Group Mission/Purpose

- Specify transmission upgrades for export of 2,000 MW geothermal power
 - Phased development plan
 - Consolidated permitting for entire project
- Consensus recommendation of stakeholders
- Create support sufficient to get upgrades built, overcome local opposition

Study Group Outcomes

- Detailed plan for entire build-out
 - Ensures reliability; least-cost/impact
 - Proposes triggers for each construction phase
 - Permitting strategy covering entire build-out
 - CPCN filing(s) for IOUs
 - Proposals to public power Boards of Directors
 - Financing/cost allocation-cost recovery plan
 - Possible joint public/IOU ownership/operation
- Advocacy for final approval/construction

Stakeholder/Participants

- Transmission owners/operators
- Potential power purchasers
- Generators/power project developers
- Counties/landowners; affected agencies
- CEC, CPUC for jurisdictional utilities
- Environmental groups/public; open to all

Collaboration Ground Rules

Cooperative group interaction

- Facilitated meetings; minutes approved by all
- Transparent planning assumptions, data access
- Good faith effort to reach consensus on key issues
 - Meeting leader clarify agreement/disagreement
 - Individual responsibility to speak up if disagree
- Work toward plan acceptable to all parties
 - Separate report by dissenting parties if necessary.

Study Group Structure

- Steering Committee
 - Recommends plan for phasing development, permitting, ownership/operation, funding
- Technical Work Group
 - Power flow, dynamic studies, production simulations
- Permitting Work Group
 - Plan to consolidate approvals for all phases of generation and transmission development

Technical Work Group

- IID, SDG&E, CA ISO, SCE, APS, WAPA, MWD, CFE, CalEnergy
 - Border fossil generators also participate
- Coordinated with SDG&E 500 kV study
- Regular reports to STEP (Southwest Transmission Expansion Project)
 - Facilitate study of regional impacts

Study Schedule

- Routing alternatives identified--Nov 04
- Base cases developed for 2014, Heavy Summer and Light Autumn--Jan-Mar 05
- Power flow studies--Mar-Apr 05
 - Determine impacts at key delivery points vs. base case
 - Narrow study alternatives
- Dynamic studies--May 05
- Production simulations--May-Jun 05
 - Develop cost estimates; rank by ratepayer benefit/cost
- Report/recommended transmission plan 6/30/05

For More Information

www.energy.ca.gov/ivsg/

Next IVSG meeting: April 12, 2005
at Sempra, San Diego